

Attorney Docket No. P13370

REMARKS/ARGUMENTS**1.) Claim Amendments**

The Applicant has amended claims 1, 3, 5-6, 8-10, 12-15, 17, 19, 21-22, 24-26, 28-31; and claims 2 and 18 have been canceled. Accordingly, claims 1, 3-17, 19-31 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Claim Rejections – 35 U.S.C. § 112

The Examiner rejected claims 13-16 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In order to expedite allowance of this application, the Applicant has amended claim 13 by deleting the limitation referring to the length of time for which bi-casting of packets is required. Therefore, this rejection with respect to claim 13 is deemed to be moot. The Examiner's consideration of the amended claim 13 is respectfully requested.

With respect to claim 14 (and dependent claims 15 and 16), the Applicant respectfully traverses this rejection. The Examiner has stated that there is insufficient antecedent basis for this limitation in the claim and seems to be implying that "more than one current address for the mobile node" is required to establish the proper antecedent basis. The Applicant respectfully disagrees.

The Applicant respectfully submits that the claim element of "at least another one of the mobile node's current addresses" only requires one current address and not more than one as suggested by the Examiner. According to Webster's Desk Dictionary of the English Language (Attachment One), the definition of "another" is "one or more of the same." Therefore, it only takes "one" before the term "another" can be invoked. Claim one mentions the "current address of the mobile phone." Thus, there is proper antecedent basis for the term.

If the Applicant misunderstood the Examiner's concern regarding claim 14, the Examiner is respectfully requested to call the Applicant's attorney so that this issue may be understood and resolved.

Amendment - PAGE 9 of 16
EUS/JIP/04-8839

Attorney Docket No. P13370

3.) Claim Rejections – 35 U.S.C. § 103(a)

The Examiner rejected claims 1-3 and 17-19 under 35 U.S.C. § 103(a) as being unpatentable over La Porta, et al. (US 6,496,505 B2). The Applicant has amended claims 1, 3, 17, and 19 to better define the intended scope of the claimed invention. The limitations of claims 2 and 18 are now incorporated into claims 1 and 17, respectively. The Examiner's consideration of the amended claims is respectfully requested. To the extent that the Examiner still maintains this rejection, the Applicant respectfully traverses this rejection.

It appears there may be some confusion between the address naming and definitions used in the present specification. The present specification defines three addresses that are used by the Mobile Node:

- Home Address (associated with the HA in the home domain)
- Regional Care-of-Address (RCOA associated with the MAP in the visited domain)
- Local care-of address (on-link care-of address or LCOA).

These three are different addresses and should not be confused with each other. The Home Address and the local care-of address (LCOA) are standard terms used in the industry. However, the Regional Care-of-Address and the way it relates to the other two addresses are inventions are unique to the various embodiments of the present invention.

La Porta uses an IPv4 protocol and relates to a tunneling optimization in which packets are forwarded from a home agent to a mobile device by col-locating a foreign agent corresponding to a mobile device at the mobile device (La Porta, Abstract). In La Porta, when a Mobile Device moves it does not change address but informs all routers in the "tree" path up to the Root Router using a special path update message containing its mobility information. Every router in the path will have a "route" to the Mobile Device (i.e. information on how to send packets to the Mobile Device). These are known in the

Amendment - PAGE 10 of 16
EUS/J/P/04-8839

Attorney Docket No. P13370

field as "host routes." Therefore all the routers in the La Porta patent must support mobility functionality.

The Root Router is just the top-most router in the tree hierarchy of the router domain that processes the special path update messages and has nothing else special compared to the pre-existing standard Mobile IP practice. In La Porta, the Root Router may contain standard DHCP (address assignment) and Mobile IP HA functionality. So there is no correspondence between the Regional Address (RCOA) as used in the present specification and the Care-of and Home addresses used in La Porta. La Porta patent simply uses the DHCP server care-of addresses and Home Addresses (owned by the HA) which was standard Mobile IP practice for the co-located care-of address case.

In contrast, amended claim 1 states:

1. A method for routing packets to a mobile node comprising the steps of:
 - providing an address update, including a regional care-of-address associated with the mobile node, to a node communicating with the mobile node;
 - sending packets, from the node communicating with the mobile node, to a node associated with the regional care-of-address;
 - receiving packets at the node associated with the regional care-of-address;
 - determining, at the node associated with the regional care-of-address, the current address of the mobile node;
 - routing the received packets to a node associated with the current address of the mobile node;
 - forwarding packets, from the node associated with the current address, to the mobile node,
 - wherein the packets are sent between the node communicating with the mobile node and the mobile node in accordance with mobile Internet Protocol version 6 (MIPv6) protocol.

As explained above, there may be a misunderstanding of the meaning and function of the "regional address" (RCOA) and the Home address and care-of address in La Porta. The Examiner references La Porta col.9 lines 59-67 which state that "host based routing is established within the home domain utilizing a specialized path setup scheme". However, this is a fundamentally different concept than claimed in claim 1 and described in the specification. As explained in the specification, the regional address

Amendment - PAGE 11 of 16
EUS/J/P/04-8839

Attorney Docket No. P13370

(RCOA) is only found in the visited or foreign domain but not in the home domain. The RCOA cannot be compared to the home address (as referenced in La Porta Col.9 line 59-67) and cannot be compared either to the "care-of" address described in other places by La Porta.

The Examiner also refers to the pre-existing state-of-the-art description in La Porta relating to the well-known Mobile IP Route Optimization draft (col. 5 lines 62-64). However, this assumes that the care-of address defined in Mobile IP Route Optimization is the same as the regional address (RCOA) defined in the current specification. It is respectfully submitted that this is an incorrect assumption because Route Optimization specifically refers to the Mobile Node's care-of address corresponds to the current specification's on-link care-of address (LCOA) since it is the Mobile Node's current address assigned on the subnet where the mobile is located (i.e. assigned by the router it is connected to). In fact, one innovative aspect of the current invention is that INSTEAD of notifying the correspondent node of the new local care-of address (LCOA) through the FA and HA (as done in Route Optimization), the current claims introduce the new concept of a regional address (RCOA) and notifies that address instead.

The examiner also refers to La Porta col.10 lines 1-15. As explained above, there may be confusion between the DHCP-assigned care-of address and the regional care-of-address as in claim 1. The co-located care-of address concept (which is the DHCP-assigned care-of address) does not exist in IPv6, but only in IPv4. However, even assuming such a concept exists in IPv6, such a concept could only approximately compare the co-located care-of address with the on-link care-of address (LCOA) as used in the present specification and not the regional care-of-address.

It is important to note that La Porta follows standard Mobile IPv4 practice where (see La Port col.10 lines 8-11) "packets destined for the mobile device are tunnelled to the mobile device's co-located care-of address from the home domain root router". Since the home domain root router is defined as containing the HA, this was already well-known as the co-located care-of address method. However this is very different method from the current claims. As stated previously the regional address (RCOA) is NOT THE SAME as the co-located care-of address. The co-located care-of address

Amendment - PAGE 12 of 16
EUS/J/P/04-8839

Attorney Docket No. P13370

concept does not exist in IPv6 but only in IPv4. Even if it were applicable to IPv6, one could only approximately compare the co-located care-of address with the on-link care-of address (LCOA) and not the regional care-of-address.

Thus, La Porta does not teach nor suggest all of the claim elements of amended claim 1.

As provided in MPEP § 2143, "[t]o establish a prima facie case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations." Furthermore, under MPEP § 2142, "[i]f the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness." It is submitted that La Porta does not teach all the elements of claim 1. Consequently, the office action does not factually support a prima facie case of obviousness for claim 1 based on La Porta.

The Examiner also notes that La Porta does not explicitly teach all of the elements of claim 1. Thus, it appears that the Examiner is either rely on his personal knowledge or by what is "well known in the art." As the Examiner is aware, in order to preserve the Applicant's right to traverse this assertion in later actions, the Applicant is forced to traverse this assertion in this office action. Thus, the Applicant respectfully traverses the assertion that these limitations are obvious in light of what is "well known in the art" and, as permitted under MPEP § 2144.03, requests that the Examiner cite a reference in support of his position for each rejected claim.

Alternatively, if the Examiner is relying on his personal knowledge as the basis for these assertions, Applicant respectfully objects to the Examiner's use of official notice. Under MPEP § 2144.03, official notice may only be taken of "facts outside of the record which are capable of instant and unquestionable demonstration as being 'well-known' in the art." (Emphasis added). When a rejection is based on facts within the personal knowledge of the Examiner, the facts must be as specific as possible, and the reference must be supported, when called for by the applicant, by an affidavit of the Examiner, which may be subject to explanation by the Applicant. 37 CFR 1.104(d)(2). Pursuant to 37 CFR 1.104(d)(2), the Applicant respectfully requests the Examiner provide such supporting facts and evidence in the form of an affidavit, so that, if necessary, the Applicant may have a chance to explain the reference in later actions.

Amendment - PAGE 13 of 16
EUS/J/P/04-8839

Attorney Docket No. P13370

In any event, La Porta simply does not teach all of the element of claim 1. So, according to the MPEP 2143, an obvious rejection is not proper and should be withdrawn. Claim 17 is patentable for similar reasons. Claims 3 and 19 depend from amended claims 1 and 17, respectively and recite further limitations in combination with the novel elements of claims 1 and 17. Therefore, the allowance of claims 3 and 19 is also respectfully requested.

The Examiner rejected claims 4, 11, 20 and 27 under 35 U.S.C. § 103(a) as being unpatentable over La Porta in view of applicant's admitted prior art (AAPA). The Applicant respectfully traverses this rejection.

First as discussed above, these dependent claims (via claim 1) contain elements and limitations which are simply not found in La Porta. The AAPA does not provide these missing elements. As provided in MPEP § 2143, "[t]o establish a prima facie case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations." It is submitted that the references, even when combined, do not teach all of the claim elements. Consequently, the office action does not factually support a prima facie case of obviousness for these claims.

Second, modified claim one sends packets according to the IPv6 protocol. In contrast, La Porta uses special IPv4 routers that contain mobility functions and support the path update messages defined in that patent. Thus, La Porta teaches away from the claimed invention as taught by Claims 4 and 20.

Regarding claims 11 and 27, La Porta teaches a HA in the root router, therefore all packets from correspondent nodes pass through the HA. Thus it would not be possible to combine La Porta with the concept of not routing packets through the root router or home agent.

The Examiner rejected claims 5-10, 12-16, 21-26 and 28-32 under 35 U.S.C. § 103(a) as being unpatentable over La Porta in view of Khalil, et al. (US 6,578,085 B1). The Applicant respectfully traverses this rejection.

First as discussed above, Claims 5-10, 12-16, (via claim 1) and claims 21-26 and 28-32 (via claim 17) contains elements and limitations which are simply not found in La

Amendment - PAGE 14 of 16
EUS/J/P/04-8839

Attorney Docket No. P13370

Porta. The Khalil patent does not provide these missing elements. As provided in MPEP § 2143, "[t]o establish a prima facie case of obviousness, ... the prior art reference (or references when combined) must teach or suggest all the claim limitations." It is submitted that the references, even when combined, do not teach all of the claim elements. Consequently, the office action does not factually support a prima facie case of obviousness for these claims.

For instance, the examiner states "the mobile node maintains a list of correspondent nodes (regional addresses nodes)." However in claim 5, for instance, the node that owns the regional address is the mobility anchor point and it has nothing to do with correspondent nodes. The mobile node maintains a list of correspondent nodes with which it has an active binding and maintains a list of registered regional addresses but they are completely separate lists and both lists don't have to be present contemporarily. So it appears that there may be confusion between correspondent nodes and regional addresses.

In any event, Claims 5-10, 12-16, 21-26 and 28-32 depend from amended claims 1 and 17 and recite further limitations in combination with the novel elements of claims 1 and 17. Therefore, the allowance of claims 5-10, 12-16, 21-26 and 28-32 is also respectfully requested.


CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Attorney Docket No. P13370

Respectfully submitted,



Bill R. Naifeh
Registration No. 44,962

Date: 10-6-04

Ericsson Inc.
6300 Legacy Drive, M/S EVR 1-C-11
Plano, Texas 75024

(972) 583-2012
bill.xb.naifeh@ericsson.com

Amendment - PAGE 16 of 16
EUS/J/P/04-8839